



DHEC's Office of Solid Waste Reduction and Recycling

For Your Information...

Construction and Demolition Debris

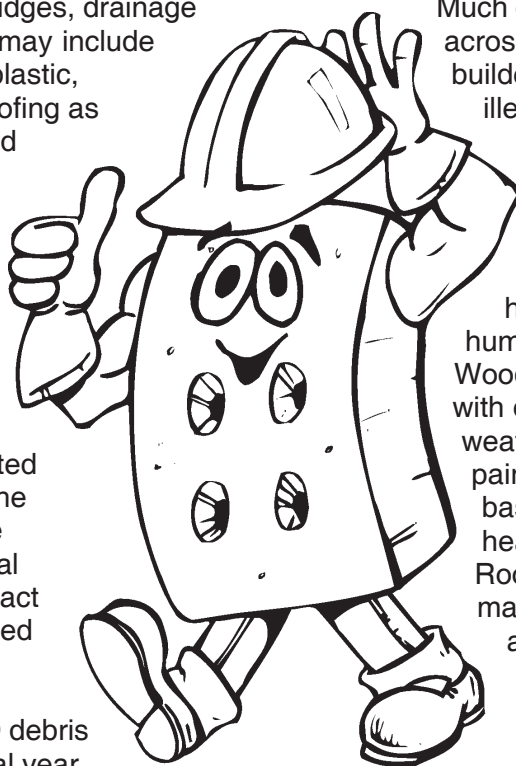
Construction and demolition debris (C&D debris) is waste material that is produced in the construction, renovation and demolition of structures. Structures include buildings of all types – residential and non-residential – as well as roads and bridges. Specific examples include the building and remodeling of homes and the repair of roads, bridges, drainage and sewer systems. C&D debris may include bricks, concrete, asphalt, glass, plastic, lumber, gypsum wallboard and roofing as well as debris associated with land clearing and natural disasters.

Why is C&D debris an issue?

C&D debris is a serious solid waste management issue for a variety of reasons. The reasons include: the amount being generated each year and expectations that the amount will increase; some of the materials are hazardous; the illegal dumping of C&D debris; and the fact that much of what is being disposed can be recycled.

More than 2.4 million tons of C&D debris was generated in the state in fiscal year 2002 – about 20 percent of the total amount of solid waste generated in the state, according to the S.C. Department of Health and Environmental Control. Of that amount, more than 1.6 million tons were disposed in the 138 permitted C&D debris landfills in South Carolina, the rest being recycled (more than 0.7 million tons), incinerated or disposed in a municipal solid waste (MSW) landfill. It is more cost-effective for generators of C&D debris to dispose of

the materials in a C&D landfill as opposed to a MSW landfill. With the state's economy growing and the amount of overall construction taking place, experts expect the amount of C&D debris generated to increase.



Much of the material found in illegal dumps across the state is C&D debris. Some builders and contractors cut their costs by illegally dumping, thus under-bidding those who legally dispose of their C&D debris at permitted landfills.

Illegal dumping is compounded by the fact that some C&D debris is hazardous material and may harm human health and the environment. Wood, for example, is commonly treated with chemicals to protect it against weather, insects and fire. Any materials painted prior to 1978 may have lead-based paint – another serious human health and environmental hazard. Roofing shingles and some insulation manufactured before 1975 may contain asbestos.

Reducing, Reusing and Recycling C&D Debris

The last solid waste management option for any material, including C&D debris, should be landfill disposal. Contractors and others involved with C&D debris should be thinking of the three Rs: reducing, reusing and recycling.

Although it can be difficult, the amount of C&D debris generated can be reduced by carefully estimating the

DID YOU KNOW? A pilot project using recycled gypsum wallboard as a soil amendment was completed in a Columbia-area housing development. Mungo Homes, Inc., as part of a partnership with DHEC's Office of Solid Waste Reduction and Recycling, conducted the project during the building of three homes. The project used scrap wallboard that was ground and applied to the soil prior to landscaping. Gypsum wallboard benefits certain types of soil by helping in water retention and adding valuable nutrients such as calcium and sulfur. A land application permit required that certified laboratories test the gypsum wallboard and soil to which it was applied.

amount of raw materials needed for the job and making sure the correct amount of materials are brought to the site.

Once the materials are purchased and the work begins, reusing and recycling C&D debris can have a number of benefits. As with many recycling programs, the advantages may not be seen immediately, but rather in the long term. Some of the benefits include: cost savings from not only avoided landfill disposal fees but also from reusing products instead of buying new products; conserving natural resources; possible revenue generation from the sale of recycled

materials; saving of valuable landfill space and; helping protect South Carolina's environment.

DHEC's Office of Solid Waste Reduction and Recycling (Office) offers the "Construction and Demolition Debris Guidebook: A Guide to Reduction and Recycling on Construction Sites." The guidebook, which also offers information on recycling processors, distributors of recycled content building materials and acceptable and unacceptable material for C&D landfills, is available on the Office's Web site at www.scdhec.gov/recycle or by calling 1-800-768-7348.

Uses of Recycled Construction Waste

RECYCLABLE MATERIAL	METHOD OF RECYCLING AND/OR END USES
Bricks	<ul style="list-style-type: none"> ● broken bricks can be crushed and used as aggregate
Untreated Wood	<ul style="list-style-type: none"> ● wood fuel ● chipped and used as mulch, animal bedding and compost
Treated Wood	<ul style="list-style-type: none"> ● new construction projects (donated to non-profit organizations) ● particle board
Concrete and Blocks (must have no contaminants, e.g., lead paint or petroleum)	<ul style="list-style-type: none"> ● crushed and used as aggregate for new ready-mix ● road base (cannot contain lead-based paint) ● fill material (cannot contain lead-based paint)
Asphalt/Shingles	<ul style="list-style-type: none"> ● can be used in the production of new asphalt ● can be used as an aggregate base
Cardboard	<ul style="list-style-type: none"> ● can be separated and sold for paper fiber feedstock
Metals	<ul style="list-style-type: none"> ● reused for metal feedstock
Gypsum Wallboard	<ul style="list-style-type: none"> ● new wallboard ● animal bedding and cat litter ● soil amendments (permit required) ● paper backing can be re-pulped and made into new backing

DID YOU KNOW? The building of a 2,000 square-foot home will generate about 2,000 pounds of waste? About 15 percent of that waste is gypsum wallboard. The National Association of Homebuilders recommends the recycling of gypsum wallboard.



Office of Solid Waste Reduction and Recycling
1-800-768-7348
www.scdhec.gov/recycle

DHEC's Office of Solid Waste Reduction and Recycling FYIs provide general information on environmental topics. Readers are encouraged to reproduce this material. For more information about solid waste issues, please call 1-800-768-7348 or visit our Web site at www.scdhec.gov/recycle. Please send written correspondence to: DHEC's Office of Solid Waste Reduction and Recycling, 2600 Bull Street, Columbia, SC 29201.